

NEW SPECIES OF THE GENUS TRIOZOIDA
(Psyllidae, Homoptera)¹

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The three species of *Triozoida* herein described bring to four the total number assigned to this genus. Although quite distinct from one another they form a very homogeneous group which is readily distinguished from the other genera of Triozinae. The principal distinguishing characters are the presence of more than one spine on the lateral surface of the apex of the metatibia, the shape of the vertex and genal processes. While the wing venation is similar, it shows considerable variation between species.

Two of the species included have been received from Senor S. C. Bruner of the Estacion Experimental Agronomica, Santiago de las Vegas, Cuba. The third, from Panama, is in material borrowed from the United States National Museum.

Triozoida media Tuthill, new species

Length to tip of folded wings, 3-3.5 mm.

Color: General color green to chocolate brown. More teneral specimens green with legs, tip of antennae, vertex and thoracic dorsum brownish. Fully matured males dark brown except basal portion of antennae, meso-scutellum, thoracic venter, genitalia green to yellow. Wings hyaline except area about furcation of M, Cu and R and spot on margin of clavus embrowned.

Structure: Head narrower than thorax. Vertex minutely pubescent, concave, smoothly rounded down to genae, medial suture prominent. Lateral ocelli raised. Genae produced as blunt, widely separated lobes, contiguous basally. Clypeus visible as third medial lobe. Antennae arising far down on genae, slender, twice as long as width of head. Eyes of moderate size, hemispherical. Thorax well arched. Pronotum large, nearly vertical, not depressed below vertex. Mesopleurites strongly developed. Forewings straight, acutely angled, 2.8 times as long as wide; basal vein short, Rs short, nearly straight to costa, not reaching furcation of media, medial cell much larger than cubital, latter strongly flattened. Head wings 0.6 as long as forewings. Metatibiae without basal

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armature, 2 outer and 3 inner apical spines. Metacoxae raised anteriorly.

Male proctiger produced caudad basally, tapered to narrow apex. Forceps as long as proctiger, in lateral view parallel-sided, somewhat curved caudad, tapering apically; in caudal view stout, arched to black tips; in dorsal view apices concavely narrowed to small, truncate, black tooth. Female genital segment 0.75 as long as rest of abdomen, stout; dorsal valve with small, blunt styliform apex; ventral valve slender, equalling dorsal, acute.

Holotype, male, *allotype*, female, 1 male and 4 female paratypes, all collected by J. Acuna in the SIERRA DE ANAFE, HAVANA PROVINCE, CUBA, February 24, 1946. They were found in the tender leaves of *Eugenia rocana* Britton and Wilson enclosed by the leaves which were folded lengthwise and somewhat misshapened, forming a kind of pseudo gall.

Holotype, allotype and paratypes in author's collection, paratypes in collection of the Estacion Experimental Agronomica, Santiago de las Vegas, Cuba.

This handsome species resembles *T. johnsonii* but is readily distinguished by the shorter radial sector and smaller cubital cell of the forewing and the less bulging vertex.

Triozoida mutabilis Tuthill, new species

Length to tip of folded wings, 3-3.4 mm.

Color: General color rufous with legs, tip of antennae, vertex and genal processes brown to black or general color greenish yellow with rufous areas on sclerites of thorax and abdomen, legs and antennae darker, genal processes black. Wings hyaline, without dark areas.

Structure: Head narrower than thorax, strongly deflexed. Vertex excavate between eyes, strongly depressed discally, bulging far over median ocellus, medial suture prominent. Lateral ocelli strongly raised. Genae produced as widely separated, blunt cones, concave on meso-cephalic surface, not touching basally. Clypeus small, visible between genal processes. Antennae slender, 1.6 times as long as width of head, arising far down on genae. Eyes large, hemispherical. Thorax broad, rather flat. Pronotum small, vertical, below caudal margin of vertex. Mesopleurites well developed. Forewings broad, obtuse apically, 2.7 times as long as wide; basal vein short, Rs long and somewhat sinuate, equalling or exceeding M₂, medial cell larger than cubital, latter somewhat flattened. Hind wings 0.6 as long as forewings. Metatibiae with serrate basal carina, 2 outer and 3 inner apical spines. Metacoxae raised anteriorly.

Female genital segment 0.66 as long as rest of abdomen, stout; dorsal valve blunt, slightly attenuate at apex; ventral valve slender, acute, nearly equalling dorsal.

Holotype, female, MOA, ORIENTE PROVINCE, CUBA, April 13, 1945, one female *paratype* same locality, November 15, 1945. Both specimens were collected by J. Acuna.

The two specimens at hand show marked difference in size and coloration. The specimen which was collected in November is smaller and of a nearly uniform rufous color. The differences are similar to those encountered in specimens of the same species collected in moist and arid regions elsewhere. While unfamiliar with the climate of northeastern Cuba, I would conclude that the November specimen developed during a hot, dry period.

This species resembles *T. johnsonii* but is readily distinguished by the smaller size, broader and obtusely pointed wing and shorter antennae.

Triozoida inconstans Tuthill, new species

Length to tip of folded wings, 2.5 mm.

Color: Head dark brown, shining. Antennae light basally, darkening toward tip. Thorax chocolate brown dorsad, lighter ventrad. Legs lighter, metatibiae almost white. Forewings dark brown along basal vein and radius to costa. Abdomen brown dorsad, nearly white ventrad. Female lighter, thorax yellowish.

Structure: Head small, narrower than thorax. Vertex smoothly excavate between eyes, protruding anteriorly over median ocellus, smoothly rounded to genae. Genae produced as short, blunt, widely separated processes. Clypeus showing between genal processes as a third similar lobe. Antennae about twice as long as width of head. Eyes small, hemispherical. Thorax broad, rather flat. Pronotum strongly depressed but not below center of vertex. Mesoscutum finely punctate. Forewings slender, 3 times as long as wide, acutely angular; basal vein strongly raised, branching variable, M and Cu often with distinct common petiole, Rs short, nearly straight, reaching to or beyond furcation of media, medial cell larger than cubital, latter somewhat flattened. Hind wings 0.6 as long as forewings, minutely setate. Metatibiae with several small teeth basally, outer apical spines varying in size and number, usually 2, some specimens with 3 or 1, in addition several small setae along margin, 3 or 2 inner spines. Metacoxae not raised anteriorly.

Male proctiger produced caudad as blunt triangular lobe, with prominent apical epiphysis. Forceps slightly shorter than proctiger; in lateral view straight, narrow, tapered to sharp black tips; in caudal view slender, strongly arched to apex, small black

tooth at tip. Female genital segment 0.6 as long as rest of abdomen, straight; dorsal valve blunt; ventral valve nearly as long as dorsal, sharp apically.

The number and size of the spines or setae on the apex of the metatibiae is quite variable in this species. In several of the specimens at hand there is a variation between the right and left tibia.

Described from 5 males and 1 female collected at ANCON, CANAL ZONE, PANAMA, June 26, 1919, by H. Dietz and I. Molino, "on Guara."

Holotype, male, No. 56964, United States National Museum, *allotype*, female, and *paratypes* in United States National Museum, paratypes in author's collection.

This handsome species resembles *T. johnsonii* but may be distinguished by its smaller size, coloration and wing venation, especially the shorter, straight radial sector.

AN ADDITIONAL LOCALITY FOR *AULICUS TERRESTRIS* LINSLEY

(Coleoptera, Cleridae)

BY G. S. MANSFIELD AND J. W. TILDEN

On May 26, 1940, a single specimen of *Aulicus terrestris* Linsley was collected by the writers near Silver Creek Hills, Santa Clara County, California, about twelve miles southeast of San Jose. The insect was found resting on grass in a small meadow in the foothills of Mt. Hamilton.

Although no specimens of the Lubber Grasshopper, *Esselenia vanduzeei* Hebard, were taken at this time, a single specimen was collected in the same area on April 13, 1941. The association of these two insects has been shown by Linsley¹.

This record is only eight or ten miles southwest of a previous one from Mt. Hamilton, but is of interest because of the much lower elevation. The point at which this collection was made is between 1000 and 1500 feet high, whereas the elevation of Mt. Hamilton is about 4200 feet.

¹Linsley, E. G., 1936. Studies in the Genus *Aulicus* Spinola. Univ. Calif. Publ. Ent., 6 (9) :249-262.